

REMARKS

By the above amendment, an informality in the specification has been corrected and new dependent claims 21-27 reciting additional features of the present invention have been presented, which features are not disclosed or taught in the cited art, as will become clear from the following discussion.

Applicant notes that claims 9-12 have been previously canceled since such claims were withdrawn from consideration as being directed to a non-elected invention.

The rejection of claims 1-8 and 13-20 under 35 U.S.C. 103(a) as being unpatentable over Takeshima et al ('672) is traversed, and reconsideration and withdrawal of the rejection are respectfully requested.

Applicant notes that Takeshima et al '672 is U.S. Patent No. 6,437,672 and the Examiner contends that "Takeshima et al '672 teach all the elements of the current invention..." (emphasis added) and that "Takeshima et al '672 provide the teaching that the magnetic shields can be divided into a number of parts as an easier way to carry and assemble (see col. 6, lines 13-30)". The Examiner then concludes:

It would have been obvious to one skilled in the art at the time the invention was made to have modified Takeshima et al '672 so that the plates have a plurality of parts or segments as an easier way to carry and assemble, as is well known to do with magnetic shields. In other words, it would have been obvious to one skilled in the art at the time that the invention was made to have made the plates out of a plurality of segments for easier assembly as is known to do with magnetic shields.

Applicant submits that the Examiner's position is based upon a hindsight reconstruction attempt of the present invention utilizing the teachings of applicant herein, which is not proper. See In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002). Furthermore, the Examiner's position represents utilization of the principle of "obvious to try" which is not the standard of 35 U.S.C. 103. See In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988).

In accordance with the present invention, a yoke forming a closed magnetic circuit of the magnetic resonance imaging apparatus includes first and second plate members and one or more support-post members interconnecting the first plate member and the second plate member, wherein each of the first plate member, the second plate member and the support-post members includes or is formed of a plurality of segments, as recited in each of independent claims 1, 5, 6, 7, 8, 14 and 18, or as now recited in newly presented dependent claims 21-27, at least some of the plurality of segments are subdivided into smaller pieces forming a respective segment and each of the first and second plate members and support-post members is assembled from the plurality of segments including the smaller pieces thereof, which feature is described at page 22, lines 3-5 of the specification, that "it is possible to further subdivide the segments (plates) into smaller pieces". Applicant submits that the recited features of the independent and dependent claims are not disclosed or taught by Takeshima et al '672 in the sense of 35 U.S.C. 103.

Applicant notes that while the Examiner refers to col. 6, lines 13-30 of the patent, applicants submit that the disclosure of Takeshima et al '672 is that the magnetic shield or magnetic circuit is divided into an upper iron plate 33, a lower iron plate 33 and iron yokes 34, as illustrated in Fig. 22 and as described in col. 5, line 62 to col. 6, line 2, wherein while the iron plates 33 and the iron yokes 34 may be separate member which are assembled together, each of the iron plates 33 and iron yokes 34 is not constructed from a plurality of segments or a plurality of smaller pieces forming respective segments, but rather, each of the upper and lower iron plates 33 and the iron yokes 34 is constructed of a single bulk component, as clearly illustrated in the various figures of Takeshima et al '672. As such, contrary to the position set forth by the Examiner, the recited features of the independent and dependent claims of this application are not disclosed or taught by Takeshima et al '672 in the sense of 35 U.S.C. 103, and all claims should be considered allowable

thereover. That is, Takeshima et al '672 fails to disclose or teach in the sense of 35 U.S.C. 103 that each of the iron plates 33 is constructed from a plurality of segments or a plurality of smaller pieces forming one segment of the plurality of segments and that each of the iron yokes 34 are also constructed of a plurality of segments or smaller pieces forming a respective segment of the plurality of segments. Thus, applicants submit that all claims patentably distinguish over Takeshima et al '672 and should be considered allowable at this time.

Applicants note that as described in connection with Fig. 2 of the drawings of this application, for example, the upper and lower plate members 25 and 26 have a construction as illustrated in Figs. 5-7 including a segment 51 and another segment 52 assembled together to form a respective plate member, with the support-post members including a plurality of individual segments 56, for example, assembled together in the manner illustrated in Fig. 7, for example, wherein, as shown, the segments have different shapes so as to be designed to be minimum areas such as not to be saturated by magnetic flux density. More particularly, as described at page 16, lines 13-17, the shapes of the segments of the yoke 17 are decided so that the field uniformity of the space in which the examinee 1 is placed is the best while limiting the expanse of leakage fluxes. As further pointed out in the paragraph bridging pages 16 and 17 of the specification, Fig. 14 shows the shape of the right support-post portion of the yoke 17 which is constructed of a combination of a plurality of segments 100 cutout of standardized steel plate of a specified thickness to obtain the shape as shown including a complicated as illustrated. Thus, the segments have different shapes and the segments can be further subdivided into smaller pieces in the manner described which provide the features as set forth in the independent and dependent claims of this application, which features are not disclosed or taught by Takeshima et al '672 in the sense of 35 U.S.C. 103 such that all claims are in condition for allowance.

With respect to other features of the independent claims, it is noted that independent claim 1 provides that the plurality of segments are formed in such a shape as to minimize leakage field strength from the first magnetic device and the second magnetic device and applicants submit that such feature is also not disclosed or taught by the cited art. Independent claim 5 further recites that each of the first and second plate members and the support-post members include a plurality of segments of different shapes and the segments are combined in a pattern to match lines of magnetic induction generated by the first and second magnetic devices, which feature is also not disclosed or taught by the cited art. Additionally, claim 5 provides that the first and second plate members are formed by a larger number of segments at positions thereon where the first and second plate members are connected to the support-post members and also in vicinities of the positions than at the other positions. Hereagain, there is no disclosure in Takeshima et al '672 as to variation of number of segments forming the plate members in dependence upon the position in such plate members. It is apparent that such features are not disclosed or taught by Takeshima et al '672. Independent claim 6 recites the feature of different shapes for the segments and that the first and second plate members have different number of segments at different positions based upon a calculated magnetic flux distribution which is not disclosed or taught in the cited art. Independent claim 7 recites features similar to claim 6, while reciting that the first and second plate members have segments of shapes to match a calculated magnetic flux distribution which also is not disclosed or taught by Takeshima et al '672. Independent claim 12 recites the feature that the first and second plate members and the support-post members are constructed by stacking in two or more layers segments formed by cutting steel plate, which features are not disclosed or taught in the cited art. Independent claim 14 recites the feature that the shape to minimize the leakage field strength from the first and second magnetic devices is a shape formed

by varying a thickness of the segments according to a flux density of the leakage field generated by the first and second magnet devices, and again, such feature is not disclosed by Takeshima et al '672 in the sense of 35 U.S.C. 103. It is noted that independent claim 18 only recites the feature that each of the first and second plate members and support-post members includes a plurality of segments, which recited features patentably distinguishing over the cited art for the reasons given above. Thus, the independent claims patentably distinguish over the cited art in the sense of 35 U.S.C. 103 and should be allowable.

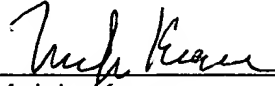
With respect to the dependent claims 19 and 20 which depend from claim 18, recite features similar to that recited in other independent claims. Likewise, other dependent claims of this application recite additional features similar to those described above, which features are not disclosed or taught in the cited art. Additionally, new dependent claims 21-27 recite the feature of at least one of the segments being subdivided into a plurality of smaller pieces and the first and second plate members and the support-post members are assembled from the plurality of segments including smaller pieces of a segment. Applicant submits that such features are not disclosed or taught in the cited art and as described in the specification of this application, such features provide an advantageous construction of a magnetic resonance imaging apparatus. Thus, applicants submit that the independent and dependent claims patentably distinguish over Takeshima et al '672 in the sense of 35 U.S.C. 103 and should be considered allowable thereover.

In view of the above amendments and remarks, applicants submit that all claims present in this application patentably distinguish over or allowance, and the cited art and should now be in condition for allowance. Accordingly, issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicant's petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing

of this paper, including extension of time fees, to Deposit Account No. 01-2135 (500.40852X00) and please credit any excess fees to such deposit account.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Melvin Kraus", written over a horizontal line.

Melvin Kraus

Registration No. 22,466

ANTONELLI, TERRY, STOUT & KRAUS, LLP

MK/cee
(703) 312-6600